TERRA

ENVISION

CONFERENCE PROGRAM

2-6 September 2019

Barcelona, Spain

Mission statement

Our Planet suffers from human activities. As scientists, we know more and more about our environment, about processes, rates of change, new threats and risks. However, the challenges seem to grow quicker than the solutions we can create.
This conference aims to focus on the scientific research towards finding solutions for the societal issues of our time. TERRAenVISION promotes interdisciplinary collaboration and networking. To bring scientists and stakeholders that have the same goal, work on the same societal issue, but have different scientific backgrounds. By bringing the people and their knowledge together, we may be able to take the steps towards solutions that can bring our society to a more sustainable situation. In this conference, we want to link to International policies such as the sustainable Development Goals, the UN Climate conventions, CAP and COP.
Environmental issues we would like to highlight and discuss:

- Land and Water Degradation and Restoration
- Nature-based solutions
- Fire in the earth system, effects and prevention
- Ecosystem services and nature conservation
- Tools in science
- Science interface: with policy and public

This conference is framed around themes. Each theme is kicked off by two plenary keynote speeches of 20 min, followed by a discussion. After the plenary session, a range of different parallel sessions will be organised.
We also want to stress that the conference is not only for scientists, but also warmly would like to invite people from outside the scientific world.

Scientific Program

Monday 2nd September

14:30-18:00: PARALLEL SOILS4EU WORKSHOPS

The two SOILS4EU workshops will be held in parallel and their aim is not only to disseminate the findings of the report but to gather expert opinions and feedback on the topic. The conclusions of the workshop will be streamed into the report and submitted to the DG ENV as one outcome of the project.
SOILS4EU is a 3 year project providing support to DG Environment of the European Commission for the implementation of the EU Soil Thematic Strategy. The project is coordinated by Deltares (the Netherlands), with four partners from Germany (Helmholtz Centre for Environmental Research Germany – UFZ), Poland (Institute of Soil Science and Plant Cultivation – IUNG) and Spain (Mediterranean Agronomic Institute of Zaragoza – IAMZ CIHEAM, and the Spanish National Research Council-Estación Experimental de Aula Dei – CSIC-EEAD).

Workshop 1: Impacts of soil degradation on human health

Conveners: Agnieszka Klimkowicz-Pawlas, Grzegorz Siebielec, Linda Maring

The WHO estimates that approximately a quarter of diseases that affect humans today occur as a result of prolonged exposure to environmental pollution. The SOILS4EU Report is making particular attention to the relations between soil pollutants and human health. Major exposure pathways and possible adverse health effects will be characterized and impacts of emerging pollutants will be emphasized. Available case studies representing linkage between epidemiologic and environmental data will be presented. The Report is also providing a comprehensive overview on the last years´ research on how other types of soil degradation (e.g. soil sealing, erosion, loss of biodiversity) affect human health. There are still many gaps, since such knowledge has not been sufficiently explored and integrated, such as the link between epidemiological data and health or the impacts of emerging pollutants.
The draft content of the report will be presented and discussed during the workshop. Case study examples, data sources, assessment tools and major soil degradation-induced impacts will be shared and discussed with the workshop participants. Finally, recommendations for measures limiting the risk, gaps in data availability and methods to better assess impact of soil degradation on human health will be formulated in order to update the report.

Workshop 2: Potential of Earth Observation for improved soil monitoring

Conveners: Rafal Wawer, Antonio López-Francos

Earth Observation systems are gaining increasing importance in environmental studies and precision agriculture. Numerous methods were developed and are in current use in those domains, enabling soil physical and chemical features to be measured directly or indirectly via plant cover characteristics. Several satellite platforms are operational, including ESA's recent Sentinel Mission. However, there are still gaps in approaches enabling a better combination of satellite and laboratory data for monitoring soil quality and degradation trends and for providing information for taking managerial decisions. The SOILS4EU project has elaborated an in-depth report on the potential of earth observation for improved land and soil monitoring. The report contains a review of broad efforts for soil monitoring at EU and national level. The available monitoring approaches will be evaluated in terms of measured parameters, gaps, potential for improvements and links with Earth Observation Systems. The report will subsequently provide a review of remote sensing techniques focusing on soil monitoring applications, discussing their applications, effectiveness, limitations and strengths, based on literature review.
The draft Report will be presented and its content will be discussed and complemented during the workshop. Group discussions will be organized to propose and discuss examples of applications and potential benefits from connecting remote sensing data with ground measurements of soil cover. The final output of the report and the workshop are recommendations for better utilization of new satellite missions by linking ground soil monitoring with satellite data or recommendations for extending existing soil monitoring programs in order to optimize efficiency of monitoring in terms of produced knowledge and cost.

18:00-20:00 Icebreaker and registration open for TERRAenVISION 2019

Refreshments are cordially provided by the SOIL4EU project

Tuesday 3nd September

11.00-14.00 Registration

Opening Session
Chair: Heike Knicker

14.00- 14.20: Welcome and opening

- **Prof. Dr. Heike Knicker**
- **Dr. Xavi Ubeda, Facultat de Geografia i Història, Universidat Barcelona**

14.20-14.45: Opening talk by Co Molenaar: Global challenges, local soilutions! (Aula Magna)

Plenary session: Land and Water Degradation and Restoration

Chair: Saskia Visser (Aula Magna)

14.45-16.00: Keynotes:

- **Claire Chenu: Climate-smart sustainable management of agricultural soils to address land degradation and restoration**
- **Jannes Stolte: Soil degradation assessment in Europe, a review of status, interaction and remediation**

1600-16.30: coffee break

16.30-18.15: Parallel sessions connected to LD an SP:

Parallel session: Land Degradation and Restoration: the State-of-the-Art (chair: Artemi Cerdà)

NR	PRESENTER	ORAL PRESENTATIONS (AULA MAGNA)
1	Jan Machac	Climate change adaptation measures are economically justifiable even under no climate change: Evidence from the South-Moravian region
2	Anika Reetsch	Transforming degraded smallholder farmland into multi-functional land use systems: A case study from Tanzania
3	Henny Omosigho	Assessing the efficacy of antibiotic treatment for the creation of axenic epigeic, endogeic and anecic earthworms
4	Manuel Pulido Fernández	Soil erosion in endangered chestnut tree farms of rural areas (Navezuelas, Cáceres, Spain)

Parallel session: Workshop Degraded land: How to achieve an added value by land stewardship?

Create public values, restore degraded land: a collective responsibility (Margot de Cleen and Co Molenaar, room 401)

The sustainable development goals (SDGs) are our joint societal challenges. Social, economic and ecologic goals are intermutually connected. Therefore social and economic goals cannot be achieved without a healthy soil-water-system and neither can a healthy soil-water-system be achieved without a healthy society and economy. To achieve SDGs changes in the system or transitions, such as a transition towards a circular economy, sustainable energy, circular agriculture or climate proof cities, are essential.

The challenges society faces are: the growing pressure on land and the soil system; the boundaries of the natural system; the imbalance between the economic, social and natural sphere and the imbalance in long term (abstract) ambitions versus short term local implementation.

Both policy makers and scientists work on these challenges. But how can we empower one another and achieve impact? What do you need to know about a transition and what instruments are available to overcome the imbalances, create public values and restore degraded land? Policy makers want to set ambitions and want to influence these transitions. Policy makers need instruments to achieve their ambitions. But how do you influence a transition? Scientists want to provide knowledge, innovations and want to address system failures. When and how do you provide your knowledge and innovations and when and where do you address system failures?

This workshop focuses on the instrument of Land Stewardship. It is considered as an instrument to connect policy makers, scientists, land users and other stakeholders for the short, the mid and the long term. In the workshop we will discuss several existing and new business models to restore the imbalance and sustainably use soil and land to achieve the SDGs.

After pitches on the above we have group discussions on the cases:

- Soil subsidence in peat lands: how to transform towards new land use considering climate, water management, biodiversity and agricultural production
- Deforested and arid areas and agriculture: how to prevent erosion and loss of organic matter by food forests or other forms of sustainable land use
- Urban development in river basins and delta areas: how to cope with subsidence and flooding

18.00-19.30: Poster session with refreshment

NR	Presenter	Poster Title
1	Michal Pástor	Payments for watershed services – European best practice examples of flood risk management
2	Saskia Visser	Roadmap for the European Joint Program SOIL: Towards climate-smart sustainable management of agricultural soils
4	Amina Hamadi	Potential impacts of agroforestry on controlling soil degradation by water erosion in the agricultural lands of foothills North-West of Dahra (Mostaganem, Algeria).
5	Martin Neumann	Raindrop influence on the soil surface
6	Lola Leveau	How to value the ecosystem services provided by a field? Parallel between the indicators used by scientists and the empirical observations of belgian farmers.
7	Njaka RALAIZAFISOLOARIVONY	Assessing soil crack dynamics and water evaporation during dryings of agricultural soil from reduced tillage and conventional tillage fields
8	Manuel Seeger	Soil dynamics and surface activity on recently diversified organic vineyards
9	Felix Dittrich	Impact of vineyard management on soil ecology
10	Fairouz Khalida KIES	Soil contamination by pharmaceutical pollutants : adsorption of an antibiotic (amoxicillin) on an agricultural land.
11	Levent Yilmaz Yilmaz	SUSTAINABLE DEVELOPMENT GOAL IN USING OCEAN CURRENT AS A RENEWABLE RESOURCE
12	Pariente Sarah	Road effect on lead content in sandy soil
13	Leonid Perelomov	The use of chemically modified humic acids for the remediation of soils contaminated by heavy metals
14	Lyuba Nenova	SEASONAL VARIATION OF SOIL PROPERTIES AND CHARACTERISTICS IN WATER REPELLENT TECHNOSOLS
15	Carla S. S. Ferreira	Assessment of UV filters and parabens in a small Portuguese peri-urban catchment
16	Rodrigo Alvarez	Emerging contaminants shallow lakes of Al-Asfar and Al-Hubail Lakes, Saudi Arabia
17	Luis Valença Pinto	Integration of Ecosystem Services and Green and Blue Infrastructures Concepts in the Land Use Planning Process: the Coimbra Case Study
18	Michaela Hrabalikova	The challenge in increasing water and soil resources resilience by landscape restoration: examples from southern Ethiopia and Iceland.
19	Leon Josip Telak	Land management impacts on soil water erosion and loss of nutrients

Wednesday 4th September

Plenary session: Tools in Science

Chair: Ioannis Daliakopoulos (Aula Magna)

9.00-10.15: Keynotes:

- **Sebastiano Trevisani: Geocomputing, new technologies and historical analysis: tools for a changing planet**
- **Jesus Rodrigo Comino: Soil Erosion as an environmental concern… for everyone?**

10.15-10.45: Coffee break

10.45-12.30 Parallel sessions connected to LD and NSB:

Parallel session: A biophysical and socio-economic approach to the fate of the Terroir (chair: Jesus Rodrigo-Comino, Aula Magna)

Nr	Presenter	Title
1	Jesús Barrena	How important is the number of points and plot size for estimating soil erosion in vineyards?
2	Jesús Rodrigo-Comino	The use of analysis of weather types to complete the studies of soil erosion in vineyards and abandoned areas
3	Adelcia Veiga	Assessment of soil quality in vineyards managed with distinct agriculture practices
4	Maria Jose Marqués	Soil management by cover crops in vineyards for climate change adaptation
5	Manuel Seeger	Diversifying steep slope viticulture – towards a sustainable intensive agriculture?

Parallel Session: Land Degradation and Restoration: the State-of-the-Art (Chair: David Finger, room 401)

Nr	Presenter	Title
1	David C. Finger	Nature-based solution for flood and drought risk reduction in southern Iceland
2	Saskia Visser	Soil as a basis to create enabling conditions for transitions towards sustainable land management as a key to achieve the SDGs by 2030
3	Vicenç Carabassa	THE COCOON SYSTEM: ECOTECHNOLOGY FOR ECOLOGICAL RESTORATION AND RAINFED AGRICULTURE IN THE MEDITERRANEAN BASIN
4	Anna Brook	A smart Multi-source and multi-scale platform for quantitative assessment of shallow or/and coastal water
5	Artemi Cerdà	Soil erosion on mountain trails in Eastern Iberian Peninsula

12.30-14.30: Lunch Break

Plenary session: Nature Based Solutions

Chair: Carla Ferreira (Aula Magna)

14.30-15.45: Keynotes:

- **Lenka Slavíková: Implementation challenges of Nature-based Solutions: The Way forward?**
- **Johanna Sorensen: Nature-based solutions in an urban perspective**

15.45-16.15: Break

16.15-18.00: parallel oral sessions

Session Nature based solutions (chair: Lúcia Barão/Carla Ferreira, room 402)

Nr	Presenter	Title
1	Miha Curk	Modelling best management practices impact in water protection areas
2	Claudia Meisina	Effects of vineyard inter-row management on soils, roots and shallow landslides probability in the Oltrepò Apennines (Lombardy, Italy)
3	Cristina Halbac-Cotoara-Zamfir	Evolution of green areas in Europe - a comparison between three urban areas
4	David C. Finger	The perception of stakeholders to implement Nature Based Solution for flood protection in the Balkans and in Iceland
5	Lúcia Barão	“BalSim”, a Mass Balance Model for Pastures

Parallel Session GEOSPHERE-ANTHROPOSPHERE INTERLINKED DYNAMICS: GEOCOMPUTING AND NEW TECHNOLOGIES (chair: Sebastiano Trevisani, Marco Cavalli and Fabio Tosti, Aula Magna)

Nr	Presenter	Title
1	Donata Melaku Canu	Mercury budget and scenario analysis for the Marano-Grado Lagoon, using modelling and observations.
2	Eloisa Di Sipio	How different natural energy sources affect the shallow geothermal suitability in urban areas: The South Africa case study
3	Alberto Alfonso-Torreño	Exploiting sUAS, SfM-MVS and a topographic algorithm to quantify the volume of sediments deposited in check dams and understand its spatial variation
4	Caterina Gozzi	Impact of landscape attributes on surface water in the Tiber River Basin (Central Italy)
5	Giacomo Tedesco	Slope and groundwater monitoring for 3D numerical modelling to ensure the structural health of an alpine road tunnel crossing an active rock slide
6	Giacomo Titti	Small-scale landslide susceptibility assessment. The case study of the Silk Road Disaster Risk Reduction
7	Iraklis Giannakis	Diagnosing Acute Oak Decline Using Ground Penetrating Radar

18.00-19.30: Poster session with refreshment

Nr.	Presenter	Poster title
1	Álvaro Tejeda-Corvillo	Spatial models predictive of “seca” risk in Extremadura. Applications at regional and local scale in protected natural areas
2	Javier C. Pareja	MICROHISTOLOGICAL ANALYSIS AND PCR-CAPILLARY ELECTROPHORESIS AS COMPLEMENTARY TECHNIQUES TO DETERMINE DIET COMPOSITION OF UNGULATES IN MEDITERRANEAN FORESTS
3	Jesús Barrena	How important is the number of points and plot size for estimating soil erosion in vineyards?
4	Leon Josip Telak	Land management impacts on soil water erosion and loss of nutrients
5	Manuel Seeger	The Impact of Crop Diversification on Grapevine Growth and Quality
6	Maya Benkova	Influence of biochar amended Fluvisol on maize yield and soil microbiota
7	Katherine Franco	LIFE SMART FERTIRRIGATION: Integrated pig manure processing for direct injection of organic liquid fertilizer into irrigation systems

8	Miha Curk	Use of Stable Isotope Techniques for Research of Diffuse Nitrate Sources in Groundwater
9	Maria Doula	Conventional agricultural practices and greenhouse gasses emission for the main Mediterranean crops
10	Ioanna Panagea	Soil structural shifts caused by land management practices
11	Adelcia Veiga	Long term impact of sludge fertilization in maize farm in Portugal
12	Anne-Karine Boulet	Conciliating traditional green manure technique and modern precision agriculture.
13	Jaroslav Vido	IoT (Internet of Things) based technology help regional farmers improve their agricultural production and effectiveness - Prototype from Technical University in Zvolen (Slovakia)
14	Carla Ferreira	Impact of pavement distribution on hillslope runoff in peri-urban landscapes, based on laboratorial experiments
15	Michal Snehota	Early Structural Changes of Constructed Soils in Bioretention Bed for Stormwater Infiltration
16	Anca-Maria MOSCOVICI	ENVIRONMENTAL LAND USE CONFLICTS FROM THE POINT OF VIEW OF SOIL COMPONENTS AND FLOODS IN THE METROPOLITAN AREA OF TIMISOARA
17	Artan Hysa	Scanning the Water-centered Transversally Connected Natural Landscape Mosaics in the Metropolitan Areas in support of NBS for Metropolitan Challenges
18	Amorim Inês Leitão	Assessment of potential supply of Ecosystem Services in Coimbra municipality
19	Rares Halbac-Cotoara-Zamfir	Education for environmental citizenship – potential key tool for enhancing the implementation of NBSs
20	Rares Halbac-Cotoara-Zamfir	Negotiating land for flood using an environmental citizenship approach
21	Rita de Cassia Almeida da Costa	FAMILY FARMERS AND WATER CONSERVATION: LEARNING NATURE-BASED SOLUTIONS AS HUMAN BASED SOLUTION
22	Dimitrios Papadimitriou	Effect of N:K ratio and Electrical Conductivity of nutrient solution on growth and yield of hydroponically grown Golden Thistle (Scolymus hispanicus L.)
23	Jesús Rodrigo-Comino	CHALLENGES AND OPPORTUNITIES FACING LIGHT POLLUTION: SMART LIGHT-HUB INTERREG PROJECT
24	Zahra Kalantari	The link between land use and flood risk assessment in urban areas

Thursday 5th September

Plenary session: Fire in the Earth System

Chair: Augustin Merino Garcia (Aula Magna)

9.00-10.15: Keynotes:

- **Artemi Cerdà: The role of fire to achieve the Sustainable Development Goals of the United Nations**
- **Anna Brook: Spectroscopy and remote sensing techniques to assess active-fire and post-fire effects**

10.15-10.45: Coffee break

10.45-12.30 Parallel sessions connected to LD and NSB:

Parallel session Fire in the Earth System (Xavi Ubeda, Aula Magna)

Nr	Presenter	Title
1	Xavier Úbeda	Grazing impact on soil properties after wildfire in Mediterranean forest: 3 years case study in NE Spain.
2	Roser Rodríguez-Carreras	After the fire: The processes of social learning of forest owners after the great forest fires in Central Catalonia
3	Artemi Cerdà	A rainfall simulator laboratory approach to determine the impact of ash depth on runoff generation and soil losses
4	Artan Hysa	Identifying the Forest Surfaces Prone to Fire Ignition and Wildfire Spread in Metropolitan Areas; a Comparative Case from Western Balkans
5	Agustin Merino	“FACING UP FIRE " UNIVERSITY VOLUNTEERING AGAINST WILDFIRES
6	Artemi Cerdà	FIRElinks. Fire in the Earth System: Science & Society

Parallel Session SENSOR PRODUCTS FOR ENTERPRISES CREATING TECHNOLOGICAL OPPORTUNITIES IN AIRBORNE REMOTE SENSING (chair: Rolf Becker, Aula Magna)

Nr		title
1	Vicenç Carabassa	UAS REMOTE SENSING PRODUCTS FOR SUPPORTING EXTRACTION MANAGEMENT AND RESTORATION MONITORING IN OPEN-PIT MINES
2	Birgit Mosler	SPECTORS Structure and Goals
3	Marcel Dogotari	Development of a UAV-Borne LiDAR system for surveying applications
4	Robbert Jan Kooij	Business canvas for sustainable development
5	Rolf Becker	Mapping invasive Rumex obtusifolius in grassland using unmanned aerial vehicle

12.30-14.30 Lunch Break

Plenary session: Science and Society

Chair: Margot de Cleen (Aula Magna)

14.30-15.45: Keynotes:

- **Rainer Baritz: The state soil in Europe 2020**
- **Katia Lasaridi: Food waste prevention through source reduction, food redistribution for human consumption and upcycling to animal feed**

15.45-16.15: Coffee Break

16.15-18.00: Parallel sessions

Parallel Session: DATA-MINING AND METHODS FOR MODELING AND ASSESSING STATE AND FATE OF SOIL WATER (chair: Ioannis Daliakopoulos, room 401)

Nr	Presenter	Title
1	Anna Brook	LCIS DSS—An irrigation supporting system for efficient water use in precision agriculture
2	Michaela Hrabalikova	Monitoring of carbon sequestration in Iceland using remote sensing technology – an overview of the LanDeg project
3	Aristeidis Koutroulis	Projections of Mediterranean freshwater vulnerability in a global context and emerging adaptation developments at the local scale
4	Anna Brook	A SMART MULTISCALE AND MULTI-TEMPORAL SYSTEM TO SUPPORT PRECISION AND SUSTAINABLE AGRICULTURE FROM SATELLITE IMAGES
5	Zahra Kalantari	Changes in net global surface water area since 1985

Parallel Session: Circularity and tools in environmental management (chair: Saskia Visser and Martin Specek, Aula Magna)

Nr	Presenter	Title
1	Eleonora Grilli	Soil quality characterization of Mediterranean areas under desertification risk for the implementation of management schemes aimed at Land Degradation Neutrality.
2	David Christian Finger	Modelling and Multi-Criteria Analysis of anaerobic digestion process to get upgraded methane from bio-residues in the city of Reykjavik
3	Jan Brabec	Role of negotiation in upstream-downstream flood protection: Demonstration in role played flooding game
4	Martin Špacek	Role Board Games as a Tool for Reconfiguration of Innovation Factors in Forest Ecosystem Services Governance
5	C. Bouki	Transformation of Hotel Food Waste into Animal Feed: Two Operational Periods of the Food for Feed Pilot Unit
6	Christina Chroni	the A2UFood project - Avoidable and Unavoidable Food Wastes: A Holistic Managing Approach for Urban Environments

18.00-19.30: Poster session with refreshments

Nr	Presenter	Poster presentation
1	Irene Fernandez	Testing the use of forest soil 13C shifts as a post-fire index for soil burn severity estimation
2	AGUSTIN MERINO	Characterization organic matter in atlantic mineral soils subjected t different soil burnt severities
3	Claudia Meisina	Integrating satellite soil moisture and rainfall data on a data-driven model for the assessment of shallow landslides hazard
4	Ioanna Panagea	Monitoring cropping systems: From data collection to cloud database storage using open source software
5	Alberto Alfonso-Torreño	Monitoring geomorphic change and catchment sediment production to understand the erosive dynamics in a gullied channel by means of high-resolution DEMs
6	Amir M. Alani	Heat development in landfill cells due to the biodegradation processes of waste materials
7	Alexakis Dimitrios	Comparison of different rainfall erosion estimation methods for the Island of Crete
8	Alexakis Dimitrios	Studying land use and land cover spatial patterns distribution in Crete, Greece with means of satellite remote sensing
9	Marx Leandro Naves Naves Silva	USE OF AIR-BASED PHOTOGRAMMETRY FOR SOIL EROSION ASSESSMENT
10	Hemang Narendra Vithlani	Applicability of Remote Sensing Workflow in Kubernetes-managed On-premise Cluster Environment

11	Clein Alexander Sarmiento Castrillón	Soft real-time mosaicking for agriculture monitoring
12	Dirk Unsenos	The Flying Microscope of ISIS IC GmbH, airborne “in-situ-diagnostics”
13	Ioannis Daliakopoulos	Development and Preliminary Results from the Testbed Infrastructure of the DRIP Project
14	Ioannis Daliakopoulos,	Soil Water Balance and Vegetation Dynamics in a Semi-arid Mediterranean Ecosystem
15	Irini Christoforidi	Soil Moisture and Temperature Induced Facilitation of Urban Endogean Fauna in Two Shrub Hedges
16	Saskia Visser	Bringing Soil information in the hands of farmers
17	Ioannis Daliakopoulos	Automatic Monitoring of a Community Backyard Composting Program
18	Manios Thrassyvoulos	Biowaste to Bioplastic (B2B): Production of Compostable Bio-Plastics from food waste
19	Manios Thrassyvoulos	Anaerobic Co – digestion of Pig and Cow Manure with a Solar Dried Mixture of Food Waste and Olive Mill Wastewater
20	Zuzana Lukacova, Alicia McNeill, Melanie Muro, Tugce Tugran	Contribution of EU and national policies towards the achievement of soil and agriculture focused SDGs – the concept of Soil-Improving Cropping Systems (SICS)

Friday 6th of September

Plenary session Ecosystem Services

chair: Manuel Pulido (Aula Magna)

9.00-10.15: Keynotes:

- **João Pedro Nunes: Impacts of wildfires on hydrological ecosystem services**
- **Kristina Veidemane: Contribution of ecosystem services to achievement of the sustainable development goals**

10.15-10.45: Coffee break

Closing session

Chair Heike Knicker

Closing keynote

- **Luca Salvati: Urbanization, Demographic Dynamics and implications for Land Resource Management in the Mediterranean region: A New Step Ahead in Understanding of Regional Complexity**

Closing panel discussion on how to connect science to society on environmental risk with a debate on way ahead for 2020

Panel discussion (moderator: Heike Knicker, Aula Magna)

Panelists:

- **Saskia Visser (Circular Systems)**
- **Luca Salvati (Urban Environments)**
- **Rolf Becker (Innovative tools)**
- **Augustin Merino Garcia (fire and dissemination)**

Questions based on lessons learned during the conference will be posed to discuss under the guidance of a facilitator.

Venue

Conference will be organised in Barcelona, at the University of Barcelona.

Faculty of Geography and History, University of Barcelona

Carrer de Montalegre, 6-8, 08001 Barcelona, Catalunya, Spain

How to get there:

- Barcelona airport is connected with the City Centre by bus, train or metro. We have attached a map of the Barcelona metro at the end of the circular. The line that goes to the Airport is L9.
- More details can be found at:
  - aerobusbcn.com (BUS)
  - renfe.com (TRAIN)
  - tmb.cat (METRO)
- The closest metro stops to the venue are Catalunya (several metro lines and also trains) and Liceu (L3).

More info on: www.terraenvision.eu

UNIVERSITAT DE BARCELONA

Facultat de Geografia i Història

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23-26 Februari 2021

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